UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

EMSAT ADVANCED GEO-LOCATION TECHNOLOGY, LLC, and LOCATION BASED SERVICES LLC, Plaintiffs, v. METROPCS COMMUNICATIONS, INC., METROPCS WIRELESS, INC., CENTENNIAL COMMUNICATIONS CORP., LEAP WIRELESS INTERNATIONAL, INC., CRICKET COMMUNICATIONS, INC., ETEX TELEPHONE COOPERATIVE INC., and ETEX COMMUNICATIONS, L.P., Defendants.	§	C.A. No. 2:08-cv-381 JURY TRIAL DEMANDED

DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF INVALIDITY

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Pursuant to Federal Rule of Civil Procedure 56, MetroPCS Communications, Inc., MetroPCS Wireless, Inc. and Centennial Communications Corp. (collectively, "Defendants") collectively move for summary judgment that all asserted claims are invalid for indefiniteness.

I. INTRODUCTION[1]

"It has long been understood that a patent must describe the exact scope of an invention and its manufacture to 'secure to [the patentee] all to which he is entitled, [and] to apprise the public of what is still open to them.'" *Markman v. Westview Instruments*, 517 U.S. 370, 373 (1996) (quoting *McClain v. Ortmayer*, 141 U.S. 419, 424 (1891)). Section 112, ¶ 2 of the Patent Act thus requires that "[t]he specification shall conclude with one or more claims particularly setting forth and distinctly claiming the subject matter which the applicant regards as his invention". 35 U.S.C. § 112, ¶ 2.

The term "exact geographic location" renders all of the asserted claims (the "Subject Claims")[2] invalid due to indefiniteness under 35 U.S.C. § 112 ¶ 2 because the Asserted Patents provide no workable standard for determining whether a geographic location is "exact." To overcome rejections of their claims by the Patent Office, the patent applicants amended their claims during patent prosecution, replacing the term "geographic location" with "exact geographic location." That newly introduced term of degree, however, is not linked to any objective standard in the patent application itself. Moreover, the patent applicants presented contradictory positions to the Patent Office as to what an "exact geographic location" included. While at one point the patent applicants explicitly distinguished certain position determining

[1] To avoid unnecessary duplicative submissions, each of the exhibit citations in this Motion refer to the exhibits filed in conjunction with Defendants' concurrently-filed claim construction brief.

[2] The term "exact geographic location" appears in all of the independent claims asserted in these actions. The "Subject Claims" are claims 1 and 5 of U.S. Patent No. 5,946,611 ("the '611 Patent"), claim 9 of U.S. Patent No. 6,324,404 ("the '404 Patent"), claims 21, 34, and 37 of U.S. Patent No. 6,847,822 ("the '822 Patent"), and claims 23, 26, 31 and 32 of U.S. Patent No. 7,289,763 ("the '763 Patent") (collectively, the "Asserted Patents").

technologies, including signal strength methods, as being ***inexact***,[3] four years later they told the Patent Office that signal strength position determination was ***exact***.[4] One of ordinary skill in the art would not have been able to determine what degree of accuracy and precision is required by the term "exact geographic location," and the Subject Claims are all therefore invalid for indefiniteness.

This indefiniteness issue is directly related to claim construction, and the Court should grant this motion in its entirety as part and parcel of the claim construction process. The Court should enter a final judgment of invalidity of the asserted Subject Claims, thus disposing of all claims based on the Asserted Patents in this case.[5]

II. STATEMENT OF LAW

A. Summary Judgment Standard

"Summary judgment is as appropriate in a patent case as it is in any other case." *Desper Prods., Inc. v. QSound Labs, Inc.*, 157 F.3d 1325, 1332 (Fed. Cir. 1998). Under Federal Rule of Civil Procedure 56, summary judgment is proper when "there is no genuine issue as to any material fact" and "the moving party is entitled to a judgment as a matter of law." *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986).

B. Standard for Indefiniteness

A patent claim must particularly point out and distinctly claim the subject matter that the patent applicants consider to be the invention. 35 U.S.C. § 112, ¶ 2. A claim does not meet this

[3] Plaintiffs have acknowledged again recently that the signal strength methods distinguished by the patent applicants are "extremely *inexact*." (Ex. 17, Plaintiffs' Responsive Claim Construction Brief, *EMSAT Advanced Geo-Location Technology, LLC v. Cellco Partnership,* Case No. 4:08-CV-00816 (N.D. Ohio) (D.I. 42) at 35 (emphasis in original)).

[4] (*See, e.g.,* Ex. 2, '404 Patent, 11:20-25).

[5] All of the asserted claims in this case are additionally invalid for reasons beyond those raised in this motion. Defendants limit their present motion to the indefiniteness of "exact geographic location" at this stage of the case. Defendants reserve the right to later move for summary judgment, if appropriate, on other grounds.

standard, and is thus considered indefinite, if it does not reasonably inform those skilled in the art of its scope. *IPXL Holdings, L.L.C. v. Amazon.com*, *Inc.*, 430 F.3d 1377, 1383-84 (Fed. Cir. 2005). The purpose of the definiteness requirement is to ensure that the claims delineate the scope of the invention using language that adequately notifies the public of the applicants' right to exclude. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005). Thus, the claims at issue must be "sufficiently precise to permit a potential competitor to determine whether or not he is infringing." *Morton Int'l. Inc. v. Cardinal Chem. Co*., 5 F.3d 1464, 1470 (Fed. Cir. 1993). Claims lacking an objective standard by which the public might determine the scope of the claimed invention do not meet that test. *Datamize*, 417 F.3d at 1350.

Like claim construction, a determination of claim indefiniteness is a question of law for the Court. *IPXL Holdings*, 430 F.3d at 1380; *see also Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005) ("A determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims.").

An indefinite claim is invalid. *See*, *e.g.*, *IPXL Holdings*, 430 F.3d at 1384. As a result, summary judgment of invalidity is proper with respect to an indefinite claim and any claims that depend therefrom. *See, e.g., Datamize,* 417 F.3d at 1356; *see also Nat'l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1198 (Fed. Cir. 1999) (finding dependent claims invalid because they depended on a claim that was invalid under 35 U.S.C. § 112).

III. THE SUBJECT CLAIMS ARE INVALID AS INSOLUBLY AMBIGUOUS

No genuine issue of material fact exists regarding the indefiniteness of the term "exact geographic location" at least because the Asserted Patents fail to provide any semblance of a standard by which the public might ascertain whether a determination of geographic location is exact enough to fall within the scope of the term. The term "exact geographic location" has no

commonly understood meaning in the relevant industry, and one of ordinary skill in the art would not have understood from the claim language, the specification, the prosecution history, or any other evidence what the patent applicants meant by this term. Further, when viewed as a term of degree, the word "exact" is subject to numerous interpretations depending upon the level of precision needed or desired. The inherent ambiguity in the applicants' chosen claim language and the irreconcilable contradictions the applicants created in the intrinsic record render the term "exact geographic location" indefinite. Indeed, as discussed more fully below, a consistent meaning of the term has eluded even the patent applicants and Plaintiffs. Thus, the Court should enter a final judgment of invalidity of the Subject Claims, which will dispose of three of the four Asserted Patents and all but one of the independent claims in this case.

A. Background of the Addition of "Exact Geographic Location" to the Claims

The significance of "exact geographic location" is informed by the circumstances under which that term was introduced to the Asserted Patents. Each of the Asserted Patents claims priority to a "parent" application filed on December 26, 1991 ("the 1991 Application") that ultimately issued as U.S. Patent No. 5,235,633 ("the '633 Patent"). As a result of that priority claim, the prosecution history of the 1991 Application is also considered to be part of the prosecution history of the Asserted Patents, and is thus relevant to a proper understanding of the meaning and scope of the Subject Claims. *See, e.g., Microsoft Corp. v. Multi-Tech Systems, Inc.*, 357 F.3d 1340, 1349 (Fed. Cir. 2004).

On July 2, 1992, the patent examiner assigned to the 1991 Application rejected all of the claims as obvious in light of prior patents, including U.S. Patent No. 4,229,620 to Schaible and U.S. Patent No. 5,054,110 to Comroe. (Ex. 10, July 9, 1992 Office Action, p. 3). In response, the applicants distinguished the positioning technologies taught in the Schaible and Comroe patents, including at least signal strength and cell site location, by proposing amendments that

changed the term "geographic location" to "exact geographic location" in each independent claim. When the '633 Patent issued, the claims thus required determination of an "exact geographic location."

The application resulting in the '404 Patent (the "'404 Application") was filed on March 21, 1996, nearly four years after the applicants introduced the term "exact geographic location" into the claims of the 1991 Application. The term "exact geographic location," which did not appear at all in the specification of the 1991 Application, appears 31 times in the specification of the '404 Patent. The term "exact geographic location" also appears in each of the independent claims asserted in this case.

B. "Exact Geographic Location" Is an Insolubly Ambiguous Term of Degree

1. Plaintiffs Assert that "Exact Geographic Location" Is a Term of Degree

On its face, the term "exact geographic location" requires an absolute, as the patent applicants required that the geographic location be ***exact***, rather than "substantially exact," "reasonably accurate," etc.[6] Read literally and without context, the Subject Claims would only extend to systems or methods capable of determining the absolute ("exact") position of a mobile unit – *i.e.,* with mathematical precision.

According to Plaintiffs, however, the applicants did not intend the term "exact geographic location" to require perfect mathematical accuracy, but only "a ***degree*** of accuracy and precision."[7] In the 1991 Application, the applicants identified two positioning system

[6] (*See, e.g.,* Ex. 21, AMERICAN HERITAGE DICTIONARY, 2d ed., 1985, p. 471).

[7] Plaintiffs propose that "exact geographic location" be construed as "a position in longitude and latitude ***having a degree of accuracy and precision*** typical of that obtained from a Global Positioning System (GPS), LORAN, or other position determining system." (Ex. 14, Plaintiffs' Preliminary Claim Constructions at p. 1 (emphasis added)). Plaintiffs have also argued that "the specification to the '633 Patent states that the 'exact position in longitude and latitude,' *i.e.*, the 'exact geographic location,' can only be determined with an extremely high degree of accuracy and precision, not with complete perfection." (Ex. 17, Plaintiffs' Responsive Claim Construction Brief, *EMSAT Advanced Geo-Location Technology, LLC v. Cellco Partnership*, Case No. 4:08-CV-00816 (N.D. Ohio) (D.I. 42) at 33).

technologies – GPS and LORAN – that might be used to determine "exact position." (Ex. 8, 1991 Application, at p. 6).[8] At that time, GPS and LORAN for commercial applications were incapable of accuracies better than about 10 and 45 meters, respectively.[9] The specification thus supports the understanding that a "***degree*** of accuracy and precision" might be sufficient. (*See* Ex. 1, '611 Patent, 3:57-61 ("Based on the signals received from the satellite, the exact position in longitude and latitude of the ground-based receiver can be determined with an extremely high ***degree*** of accuracy and precision.") (Emphasis added)). Thus, in order for the Subject Claims to make sense in light of the specification, the term "exact" can only be read as a term of degree relating to the accuracy of a determined geographic location.

2. The Asserted Patents Provide No Objective Standard for the Term "Exact Geographic Location"[10]

If the term "exact geographic location" does not require perfect accuracy, however, the Subject Claims are insolubly ambiguous, as they do not specify ***what*** degree of accuracy is required. First, the claim language provides no actual parameters to define the accuracy required for an "exact" geographic location. (*See, e.g.*, Ex. 1, '611 Patent, 6:57-7:11; Ex. 2, '404 Patent, 17:27-42; Ex. 3, '822 Patent, 18:7-22; Ex. 4, '763 Patent, 18:38-54). Nor does the claim language provide any indicia, explicit or implicit, to guide one of ordinary skill in the art in

[8] Citations to the patent column and line numbers are in column:line format. For example, Column 3, Lines 35-37 are cited as 3:35-37.

[9] (*See, e.g.,* Ex. 36, C.D. McGillem, et. al., Experimentally determined accuracy and Stability of Loran C Signals for Land Vehicle Location, in 31 IEEE Transactions on Vehicular Technology 15 (1982); Ex. 30, P.K. Enge and K.E. Olson, Medium frequency Broadcast of Differential GPS Data, in 26 IEEE Transactions on Aerospace and Electronic Systems 607 (1990).

[10] Defendants have, in the alternative to their arguments regarding indefiniteness, proposed constructions for the term "exact geographic location." Defendants do not, however, contend that an objective standard exists for the term at issue, nor that Defendants' constructions remedy the insoluble ambiguity of the term. The fact that Defendants propose alternative constructions for this term should thus not be taken as an admission that the term satisfies 35 U.S.C. § 112. *See, e.g.*, *Halliburton Energy Svcs., Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008). Defendants' proposed alternative constructions do not render the terms definite but merely make clear that certain positioning systems, which applicants disclaimed during prosecution of the '633 Patent, cannot be included in the scope of the invention.

determining whether a particular system might infringe (*e.g.*, whether a geographic location used in the system is accurate enough to be deemed "exact").[11] The claim language is thus ambiguous on its face.

The specifications of the Asserted Patents and related patents only further muddy the waters. In particular, the specifications provide no objective standard against which a positioning system might be judged in order to determine infringement. *See Datamize*, 417 F.2d at 1350 ("Some objective standard must be provided in order to allow the public to determine the scope of the claimed invention."). Nowhere do the specifications state that a location determined within a particular accuracy (*e.g.*, a certain distance) is sufficiently exact, and there is no discernible threshold of accuracy implied by the purpose or functionality of the invention. *See, e.g., Sys. Mgmt. Arts Inc. v. Avesta Techs., Inc.*, 137 F. Supp. 2d 382, 397 (S.D.N.Y. 2001) (finding that the purpose of the invention did not suggest a standard by which a term of degree could be measured).[12]

Searching the Asserted Patents' specifications for implicit indications of the degree of accuracy the patent applicants intended their claims to require is similarly futile. For example, although the specifications of the Asserted Patents identify GPS and LORAN as positioning systems that could determine exact location, the accuracies of GPS and LORAN varied wildly at the time of the invention, and thus provide no meaningful benchmark. Moreover, it is not enough to satisfy the definiteness requirements that a patent provide some working examples that arguably fall within the scope of the claims. The Supreme Court has clearly held that a patent

[11] For example, Claim 1 of the '611 Patent merely indicates that an "exact geographic location" of a mobile unit should be determined and then compared with "stored geographic data" required to route the call – never indicating how an exact geographic location might be identified. (Ex. 1, '611 Patent).

[12] In *Systems Management*, the court found that "the purpose of the invention does not yield the same type of assistance in understanding the standard by which the term of degree at issue, 'likely,' is to be measured." 137 F. Supp. 2d at 397.

may not create a "zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims." *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942). Where, as here, the disclosure of working examples does not provide any guidance as to the outer boundaries of the claim, the claims are still indefinite. *Miles Labs. Inc. v Shandon Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993) ("[t]he invention's operability may say nothing about a skilled artisan's understanding of the bounds of the claim.").

The remaining few characterizations of an "exact" location are also too vague to provide any guidance:

- "All that is required is that the source of positional data be able to generate ***precise and accurate*** locational data on a fixed or a rapidly moving object." (Ex. 4, '763 Patent, 9:59-62; emphasis added).

- "Based on the signals received from the satellite, the exact position in longitude and latitude of the ground-based receiver can be determined with an ***extremely high degree of accuracy and precision***." (Ex. 1, '611 Patent, 3:57-61; emphasis added).

- "The exact location of each mobile unit is determined using a Global Positioning System (GPS), LORAN, or ***other position determining system***." (Ex. 1, '611 Patent, 3:36-39; emphasis added).

- "The first step in the registration process, block 102 is to determine the exact geographic location, block 201 of the communications device via either GPS, block 202, signal strength, block 203, Loran, block 204, triangulation or ***other similar location means***." (Ex. 2, '404 Patent, 11:20-25; emphasis added).

None of those passages indicates any standard by which one might determine whether a geographic location is sufficiently "exact" to fall within the scope of the Subject Claims. In particular, the specification's broad statement that "***other position determining systems***" may be used to determine the exact geographic location of the mobile unit fails to provide any scope or basis for determining how accurate or precise the location must be. At best, these passages merely identify positioning technologies which the applicants believed were ***capable*** of

generating "exact geographic locations." As discussed below, that identification not only fails to remedy the indefiniteness of the Subject Claims, but actually exacerbates the problem. More importantly, neither those passages nor any other part of the specifications indicates how one of ordinary skill in the art might determine whether a ***geographic location*** is "exact."

In *Datamize*, the asserted claims specified that when practicing the invention, an "aesthetically pleasing" appearance should result. 417 F.3d at 1344-45. The plaintiff was unable to offer an "objective definition identifying a standard for determining when an interface screen is 'aesthetically pleasing,'" and thus the court held the implicated claims indefinite. *Id*. at 1350. Criticizing the subjective nature of the term at issue, the Federal Circuit found that "[s]ome objective standard must be provided in order to allow the public to determine the scope of the claimed invention." *Id*. The court also confirmed that terms of degree should invoke similar analysis, noting that "'[w]hen a word of degree is used, the district court must determine whether the patent's specification provides some standard for measuring that degree.'" *Id*. at 1351 (citation omitted).

As in *Datamize*, the Asserted Patents provide no objective standard for the term "exact geographic location," and the public is therefore unable to determine the scope of the Subject Claims. As discussed above, the patent applicants apparently intended the modifier "exact" to be a term of degree, but the Asserted Patents' specifications provide no actual "standard for measuring that degree." And the listed examples of positioning systems that might be ***capable*** of generating an "exact geographic location" do not embody any discernible standard of exactness due to their wildly differing ranges of accuracy.[13] *See Datamize*, 417 F.3d at 1352 (finding examples of claimed embodiments to be unhelpful in extrapolating the meaning of the term "aesthetically pleasing").

[13] *See* footnote 13.

C. The Indefiniteness of "Exact Geographic Location" Cannot Be Remedied

The present motion should be granted because there are no reliable indications of the required degree of accuracy for the term "exact" in the intrinsic record (*i.e.*, the Asserted Patents and their prosecution histories), leaving no genuine issue of material fact regarding the indefiniteness of the Subject Claims. Plaintiffs can only respond to this plain lack of specificity by arguing that the required specificity is ***implicit*** in the Asserted Patents. Such arguments must fail, however, in light of the irreconcilable inconsistencies in the intrinsic record and the impossibility of saving the Subject Claims through a narrowing construction.

1. The Intrinsic Record Is Flatly Inconsistent and Supports No Construction of "Exact Geographic Location"

Seemingly having scoured the intrinsic record for any material that might possibly support a construction of the term "exact geographic location," both the patent applicants and Plaintiffs have apparently come up empty-handed. For example, during prosecution of the 1991 Application, the applicants began characterizing the exactness of a geographic location as being based on the ***positioning technology*** by which it was determined. (Ex. 9, Oct. 8, 1992 Amendment, p. 6). Plaintiffs have followed that approach, broadly labeling a positioning technology, rather than a specific geographic location, as either "exact" or "inexact":

> Using signal strength as an indication of location, as done by the Schaible patent, is extremely ***inexact***, when compared to the longitude and latitude coordinates provided by a GPS, LORAN, or other position determining system.[14]

Plaintiffs clearly found that generalization necessary because the intrinsic record is devoid of any standard for determining whether a geographic location is exact. With no objective standard available, Plaintiffs have shifted the focus from the geographic location itself, as recited in the

[14] (Ex. 17, Plaintiffs' Responsive Claim Construction Brief, *EMSAT Advanced Geo-Location Tech., LLC v. Cellco P'ship*, Case No. 4:08-CV-00816 (N.D. Ohio) (D.I. 42) at 35 (emphasis in original)).

Subject Claims, and as discussed below, turned instead to the disclosed positional technologies, attempting to extrapolate a rule for exactness based on characteristics of those technologies. Because such extrapolations are both unworkable and inconsistent, however, they cannot resolve the indefiniteness of the disputed term.[15]

Moreover, Plaintiffs and the patent applicants have, depending on how it best served their interests at the time, alternately characterized signal strength positioning as either inexact or exact. These inconsistencies, which demonstrate the applicants' and Plaintiffs' own confusion as to what constitutes "exact", further highlights the ambiguity of the term. During prosecution of the 1991 Application, the patent examiner rejected certain claims as being obvious in light of U.S. Patent No. 4,229,620 to Schaible and U.S. Patent No. 5,054,110 to Comroe. (Ex. 10, July 9, 1992 Office Action at p. 3). In response to that rejection, the patent applicants during prosecution coined the term "exact geographic location" – a term that appears nowhere in the 1991 Application itself – in order to distinguish the claimed invention from the Schaible and Comroe prior art patents. While proposing their amendment to replace "geographic location" with "exact geographic location," the applicants stated:

> For example, the Schaible patent is cited as teaching a mobile radiotelephone station two-way ranging system that includes a switching office. This patent is cited as teaching the desirability of maintaining some indication of the location of the mobile unit for hand-offs. However, applicants are not claiming as the invention the concept of knowing where a mobile unit is per se, but are claiming a means and a method that has a data storage means in an MTSO that matches the <u>exact</u> geographic location of a mobile unit to a cell site. The Schaible patent expressly states, in column 10, lines 55 et seq., that mobile unit location is determined using *SIGNAL STRENGTH*. Still further, this patent uses signal strength as an indication of location. Therefore, this patent merely

[15] Defendants have, of necessity, referred to positioning technologies in their alternate constructions. Again, this is a function of the error-ridden intrinsic record, which equates "exactness" with positioning technologies. Although this generalization is insufficient for establishing what the term "exact geographic location" *does* mean, the applicants' clear disclaimers are sufficient to confirm what it ***does not*** mean, as reflected in Defendants' proposed constructions.

> discloses what applicants already know is old, and which has the problems that applicants' invention overcomes.

(Ex. 9, Oct. 8, 1992 Amendment, at p. 6 (emphasis in original)). The applicants similarly distinguished the Comroe patent, which teaches a cellular registration system in which each user is located by association with a particular cell in the wireless network based on the disclosed positioning technology:

> The mobile unit [in the Comroe patent] never indicates what its exact geographic location is, only that it is near a particular cell site (see column 4, lines 13-15 in which it is stated that "The third data element holds the ID of the cell in which the communications unit has last registered its presence. . . .").

(*Id.* at 8; *see also* Ex. 6, Comroe Patent, 2:15-17, 29-35). In other words, during the prosecution of the 1991 Application, the applicants argued that at least the positioning systems disclosed in the Schaible (signal strength) and Comroe (cell site ID) patents were ***incapable*** of generating the "exact geographic locations" required by their claims. Indeed, the applicants relied on that understanding in their attempt to convince the patent examiner that claims with the term "exact geographic location" were patentable over the Schaible and Comroe prior art patents.

Moreover, Plaintiffs admit that locations determined based on signal strength or cell site ID fall outside the scope of "exact geographic location" as it is used in the Subject Claims:[16]

> Using signal strength as an indication of location, as done by the Schaible patent, is extremely ***inexact***, when compared to the longitude and latitude coordinates provided by a GPS, LORAN, or other position determining system. . .
>
> * * *

[16] Plaintiffs' association of "exact geographic locations" with positioning system technologies leads to confusion and inconsistency. In the passage most closely approximating a definition of "exact geographic location" in the '611 Patent, for example, the patent applicants stated that the "exact location of each mobile unit is determined using a Global Positioning System (GPS), LORAN, or other position determining system." (Ex. 1, '611 Patent, 3:36-39). Reading this statement in light of Plaintiffs' association of exactness with positioning technologies, it sets no boundary on the "exact" positioning system technologies the applicants intended to cover, as GPS, LORAN, and ***other*** positioning systems are all within the alleged scope of the invention. Such "other" systems might be more or less accurate than GPS or LORAN; the specification provides no restriction at all.

> Using cell site ID as an indication of location, as done by the Comroe patent is again extremely ***inexact***, when compared to the longitude and latitude coordinates provided by a GPS, LORAN, or other position determining system.

(Ex. 17, Plaintiffs' Responsive Claim Construction Brief, *EMSAT Advanced Geo-Location Tech., LLC v. Cellco P'ship*, Case No. 4:08-CV-00816 (N.D. Ohio) (D.I. 42) at 35 (emphasis in original)).

In perfect contradiction with their position during prosecution of the 1991 Application and Plaintiffs' recent statements, the patent applicants stated in the 1996 application that led to the asserted '404, '822, and '763 Patents that signal strength ***can*** be used to determine exact geographic location. The specifications, to which courts first turn for guidance when presented with ambiguous claim language, *Phillips*, 415 F.3d at 1315-16, also provide relevant indications of the meaning of "exact geographic location." While the 1991 Application, upon which Plaintiffs rely for priority, does not use the term "exact geographic location," the specifications of each of the '404 Patent, the '822 Patent, and the '763 Patent state:

> The first step in the registration process, block 102 is to determine the exact geographic location, block 201 of the communications device via either GPS, block 202, ***signal strength***, block 203, Loran, block 204, triangulation or other similar location means.

(Ex. 2, '404 Patent, 11:20-25; emphasis added). Thus, according to the ***specifications of three of the four asserted patents***, an "exact geographic location" can be determined based on signal strength. According to the ***prosecution history*** and Plaintiffs' recent statements in the Opening Claim Construction brief in the Ohio case, on the other hand, a geographic location based on signal strength is "extremely ***inexact***." (Ex. 17, Plaintiffs' Responsive Claim Construction Brief, *EMSAT Advanced Geo-Location Tech., LLC v. Cellco P'ship,* Case No. 4:08-CV-00816 (N.D. Ohio) (D.I. 42) at 35).

In fact, the patent applicants and Plaintiffs have taken contradictory positions regarding the meaning of "exact geographic location" on multiple occasions, as indicated in the following timeline:

	Date	Statement Made By/To	Position Taken
1)	Oct. 8, 1992	By: Patent Applicants To: Patent Office	**INEXACT**: During prosecution of the 1991 Application, patent applicants distinguish positions generated by signal strength methods from "exact geographic locations." ("The Schaible patent expressly states, in column 10, lines 55 et seq., that mobile unit location is determined using SIGNAL STRENGTH. Still further, this patent uses signal strength as an indication of location. Therefore, this patent merely discloses what applicants already know is old, and which has the problems that applicants' invention overcomes." (Ex. 9, Oct. 8, 1992 Amendment, at p. 6).
2)	March 21, 1996	By: Patent Applicants To: Patent Office	**EXACT**: In their application for the '404 Patent, the patent applicants claim that an "exact geographic location" ***can*** be determined using signal strength positioning. ("The first step in the registration process, block 102 is to determine the exact geographic location, block 201 of the communications device via either GPS, block 202, signal strength, block 203, Loran, block 204, triangulation or other similar location means." (Ex. 2, '404 Patent, 11:20-25).
3)	April 17, 2009	By: Plaintiffs To: U.S. District Court for the Northern District of Ohio	**INEXACT**: Plaintiffs argue that signal strength positioning was "extremely ***inexact***" during claim construction briefing. ("Using signal strength as an indication of location, as done by the Schaible patent, is extremely ***inexact***, when compared to the longitude and latitude coordinates provided by a GPS, LORAN, or other position determining system." (Ex. 17, Plaintiffs' Responsive Claim Construction Brief, *EMSAT Advanced Geo-Location Tech., LLC v. Cellco P'ship*, Case No. 4:08-CV-00816 (N.D. Ohio) (D.I. 42) at 35 (emphasis in original))
4)	Feb. 17, 2010 (and March 27, 2009)	By: Plaintiffs To: Defendants	**EXACT**: Plaintiffs propose a construction of "exact geographic location" that literally extends to locations determined using ***any*** positioning method, including signal strength positioning. (Proposed construction: "a position in longitude and latitude having a degree

			of accuracy and precision typical of that obtained from a Global Positioning System (GPS), LORAN, or other position determining system" (Ex. 14, Plaintiffs' Preliminary Claim Constructions, at p. 1)).

In attempting to have it both ways, the patent applicants and Plaintiffs have generated further confusion regarding the meaning of "exact geographic location" and rendered the Subject Claims incurably indefinite. One of ordinary skill in the art would not have understood whether a geographic location generated based on signal strength positioning methods should be considered an "exact geographic location."

2. "Exact Geographic Location" Is Not Amenable to Any Construction

Courts do not redraft defective claims. *Honeywell Int'l, Inc. v. Int'l Trade Comm'n*, 341 F.3d 1332, 1341 (Fed. Cir. 2003) (citations omitted). Nevertheless, if a "narrowing construction can properly be adopted" for an otherwise indefinite claim term, courts may adopt such a construction and find the claims sufficiently definite. *Id.* at 1338-39 (citations omitted). In the present case, however, the indefiniteness of the term "exact geographic location" is so pervasive and irreparable that no narrowing construction is possible.

GPS and LORAN are the two positioning techniques specifically identified in the 1991 Application as being capable of producing an "exact geographic location." At the time of the invention, the accuracy of civilian GPS techniques ranged from 10 to 100 meters.[17] By contrast, the accuracy of LORAN ranged from 45 to 926 meters.[18] Accordingly, positioning systems with such variance in accuracy and precision cannot be called "exact."

[17](Ex. 30, P.K. Enge and K.E. Olson, Medium frequency Broadcast of Differential GPS Data, in 26 IEEE Transactions on Aerospace and Electronic Systems 607 (1990)).

[18](Ex. 27, C. Belove, "Handbook of Modern Electronics and Electrical Engineering," Chapter 52, John Wiley & Sons, 1986; Ex. 36, C.D. McGillem, et. al., Experimentally determined accuracy and Stability of Loran C Signals for Land Vehicle Location, in 31 IEEE Transactions on Vehicular Technology 15 (1982))

The statements made by the patent applicants during prosecution of the 1991 Application, however, foreclose a narrowing construction. As explained in Section III.C.1 above, the patent applicants, while trying to save the proposed claims from rejection, distinguished geographic location techniques based on signal strength, cell site ID, and two-way ranging as inexact. (Ex. 9, Oct. 8, 1992 Amendment, p. 6). At the time of the invention, however, at least two of those three denigrated techniques were ***more accurate*** than LORAN, and in some situations even *more accurate* than GPS.[19] For example, signal strength positioning methods had accuracies between 10 and 575 meters in 1991, compared with LORAN's 45-926 meter accuracy.[20] As a result, no rational narrowing construction can be adopted, since any construction that includes a specified threshold for exactness would either exclude the specifically identified embodiments or include the specifically disclaimed technologies. Thus, even if an intended threshold for exactness could somehow be divined from the Asserted Patents, it would be unworkable because it would necessarily be inconsistent with either the patent specifications or the patent applicants' statements during prosecution.

That the accuracies of possible positioning techniques must be expressed as a range of values emphasizes the importance of an identifiable standard for determining the claimed

[19] (*See e.g.*, Ex. 30, P.K. Enge and K.E. Olson, Medium frequency Broadcast of Differential GPS Data, in 26 IEEE Transactions on Aerospace and Electronic Systems 607 (1990); Ex. 27, C. Belove, "Handbook of Modern Electronics and Electrical Engineering," Chapter 52, John Wiley & Sons, 1986; Ex. 36, C.D. McGillem, et. al., Experimentally determined accuracy and Stability of Loran C Signals for Land Vehicle Location, in 31 IEEE Transactions on Vehicular Technology 15 (1982); Ex. 38, H. Song, "Automatic Vehicle Location in Cellular Communications Systems," IEEE Transactions on Vehicular Technology, Nov. 1994; Ex. 33, F. Iwaki, et al., "Recognition of Vehicle's Location for Navigation," IEEE Vehicle Navigation and Information Systems Conference, 1989; Ex. 39, W. Sternberger and L. Le Blanc, Short Range Precision Navigation, MTS-IEEE, Oceans '76, at 5E-1 (1976); Ex. 40, W. T. Warren, et al., "Vehicle Location System Experiment," IEEE Transactions On Vehicular Technology, vol. VT-21, no. 3, Aug. 1972; Ex. 37, M. Mouly and M. Pautet, The GSM System for Mobile Communications, 1992; Ex. 31, H. Eriksson and R. Bownds, "Performance of Dynamic Channel Allocation in the DECT System," IEEE 41st Vehicular Technology Conference, 1991).

[20] (*See* Ex. 38, H. Song, "Automatic Vehicle Location in Cellular Communications Systems," IEEE Transactions on Vehicular Technology, Nov. 1994; Ex. 33, F. Iwaki, et al., "Recognition of Vehicle's Location for Navigation," IEEE Vehicle Navigation and Information Systems Conference, 1989; Ex. 37, M. Mouly and M. Pautet, The GSM System for Mobile Communications, 1992.)

exactness. For example, in addition to variation between models of a single type of positioning system, such as GPS, the accuracy of a particular positioning instrument often varies based on environmental factors.[21] Claims subject to such variance are often indefinite. *See, e.g., Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1254-55 (Fed. Cir. 2008) ("When a proposed construction requires that an artisan make a separate infringement determination for every set of circumstances in which the composition may be used, and when such determinations are likely to result in differing outcomes (sometimes infringing and sometimes not), that construction is likely to be indefinite."). To the extent the claims are taken at face value and "exact" is understood to be a quality of the "geographic location" rather than of the underlying position-determining system, the variation in the accuracy of any given system further suggests that the Subject Claims are indefinite.[22]

3. Plaintiffs' Proposed Construction for "Exact Geographic Location" Is Also Indefinite

Even if the Subject Claims could be rendered definite through a narrowing construction of "exact geographic location," which they cannot, Plaintiffs have not suggested one. To the contrary, Plaintiffs have proposed that the term be construed as "a position in longitude and latitude having a degree of accuracy and precision ***typical*** of that obtained from a Global Positioning System (GPS), LORAN, or ***other position determining system***," which adopts the ***unlimited*** language in the '611 Patent. (Ex. 14, Plaintiffs' Preliminary Claim Constructions, at

[21] (Ex. 34, E. Kaplan, "Understanding GPS: Principles and Applications," Artech House (1996)).

[22] If nothing else, the varied accuracy of available position-determining methods underscores the need for additional detail from the intrinsic record about the meaning of the term "exact geographic location." With such detail lacking, not only is the public unable to determine the proper threshold for the claimed exactness, but it is unaware of the appropriate method of *measuring* that exactness (*i.e.*, maximum accuracy, minimum accuracy, actual accuracy, average accuracy). *See Honeywell Int'l, Inc. v. Int'l Trade Comm'n,* 341 F.3d 1332, 1334-36 (Fed. Cir. 2003) (finding claims indefinite where patent, despite providing a numerical value for a claimed feature of the invention, failed to specify which of several methods should be used to determine the value for an allegedly infringing device); *Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 1470 (Fed. Cir. 1993) (upholding determination of indefiniteness where "the claimed compounds [could] not be identified by testing and . . . one skilled in the art could not determine whether a given compound was within the scope of the claims").

p. 1 (emphasis added)). Put simply, Plaintiffs' construction would lead to the absurd result that an "exact geographic location" is a position having a degree of accuracy and precision typical of ***any*** positioning system. As such, that is "the broadest possible construction," one which purports to capture "all future improvements without regard to whether [the patent applicants] invented such improvements," including later-developed technologies both more and less accurate than GPS and LORAN. Such a construction is plainly improper. As the Federal Circuit has stated:

> [S]uch a construction would undermine the notice function of the claims because it would allow [the applicants] to benefit from the ambiguity, rather than requiring [the applicants] to give proper notice of the scope of the claims to competitors. Additionally, adopting the broadest possible construction could retard innovation because cautious competitors may steer too far around that which [the applicants] actually invented, neglecting improvements that otherwise might be made.

Halliburton, 514 F.3d at 1254. This broad construction apparently draws within the scope of the Subject Claims even those technologies ***acknowledged*** by Plaintiffs to be ***inexact***, including signal strength and cell site ID, rendering Plaintiffs' proposed construction inconsistent with the prosecution history and with Plaintiffs' own statements. Here, as in *Halliburton*, the applicants' failure to particularly point out and distinctly claim the subject matter of the invention should not be resolved in Plaintiffs' favor.[23]

IV. CONCLUSION

Not only did the patent applicants leave the public with no guidance regarding the proper scope of "exact geographic location" – a critical claim term in nearly every asserted claim – but they also left an intrinsic record so thoroughly internally inconsistent that no possible

[23] The court in *Halliburton* also discussed the impropriety of adopting a narrowing construction that would include only the embodiments disclosed by the patent. In short, the court found such a construction improper because, as in the present case, the specification indicated that the term at issue was not intended to be limited to the disclosed embodiments. 514 F.3d at 1250.

construction of the term can resolve its ambiguities. The Subject Claims are thus invalid due to indefiniteness, and Defendants' motion should be granted.

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CERTIFICATE OF SERVICE

I certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF System per Local Rule CV-5(a)(3).

/s/ *Joshua Parker*